REMARKS

Claims 43 – 45 and 47 are pending. Claim 43 has been amended. Claims 1 – 42, 46 and 48 were previously cancelled. No new matter has been added. Reconsideration is requested.

CLAIM REJECTIONS

35 U.S.C. § 101 and 112 Rejections

In the Office Action, the Examiner rejected claim 43 under 35 U.S.C. § 101.

The Office Action states on page 2, "The terms "circuit design library" and "a set of transmission line topologies" and "a set of parametrized, equivalent RLC ladder networks" in the claim do not show any functional descriptive materials for getting the utility output, therefore they are missing the patentable utilities."

In addition, the Examiner rejected claim 43 under 35 U.S.C. § 112 first paragraph because "since, the claimed invention is not supported by either an asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention."

Applicants respectfully disagree. The term "integrated circuit design library" is known, as is its use. In fact, a search in the US Patent Collection for that very term produces 6 US patents that use the term somewhere in their specifications (see the search results page in Appendix A). Some of the listed patents even use the term in their claims.

The following text, from US 6,490,708, describes one such library:

> "This partial duplication leads to the creation of standard cell libraries made up of components that perform certain logical functions. These components--the cells--themselves consist of more basic units called devices. When an ASIC's design calls for a certain function to be performed, a cell that accomplishes that function can be selected from the cell library instead of being designed from the ground up. This time-saving step becomes very important when it is considered that large ASIC manufacturers may produce several hundred ASICs in a year."

(Applicants note that an ASIC is an integrated circuit and thus, the cell library is another term for an integrated circuit design library).

Thus, how to use circuit design libraries is known. From this text (and others), it is clear that an integrated circuit design library is used to provide pre-designed elements which may be selected as elements of a circuit being designed. Such a library is a useful, concrete and tangible tool for circuit design and a tool is patentable subject matter.

In order to further examination, claim 43 has been amended to recite that the circuit design library is "for providing design elements for analog and mixed signal circuits". This functional language indicates the use of the library. Moreover, claim 43 now recites that the transmission line topologies are "selectable as design elements" of a circuit "being designed". This further functional language indicates both the use of the topologies and the output of the library. The RLC ladder networks are provided for each topology and thus are available once a transmission line topology is selected.

Claim 43, initially and as amended, recites patentable subject matter.

Moreover, one skilled in the art would know how to use the claimed invention since, as argued above, integrated circuit libraries are known as is how to use them. (from above: "When an ASIC's design calls for a certain function to be performed, a cell that accomplishes that function can be selected from the cell library instead of being designed from the ground up.").

Moreover, both the previous wording and the current wording for the transmission line topologies indicate their use, that they are "for critical interconnect lines". Thus, Applicants respectfully assert that one skilled in the art would clearly know how to use the claimed invention.

Accordingly, Applicants respectfully request that the rejection of claim 43 under 35 USC 101 and 112, first paragraph, be withdrawn.

35 U.S.C. § 102 Rejections

In the Office Action, the Examiner rejected claims 43 – 45 and 47 under 35 U.S.C. §102(e), as being anticipated by Dansky et al. (US 6,342,823). Applicants respectfully traverse this rejection in view of the remarks that follow.

Dansky describes an analysis tool and not an integrated circuit design library. In the Abstract, Dansky states:

> "A method and system for reducing the computation complexity and improving accuracy of delay and crosstalk calculation in transmission-lines with frequency-dependent losses. An analysis tool based on restricted coupled-line topologies, simple two-dimensional to three-dimensional RLC matrix conversion, and use of prestored synthesized circuits that accurately capture frequency-dependent loss effects."

Dansky's method is to improve the "calculation" for transmission lines. Dansky also talks about "An analysis tool" and not about "An integrated circuit design library" as recited in claim 43. The "restricted coupled-line topologies" mentioned in Dansky's Abstract are for the simulation and they are not "selectable as design elements" as recited in amended claim 43.

This can be further seen in Fig. 10, which is discussed at col. 5, lines 19 – 35, quoted below:

> "FIG. 10 shows the schematic of the analysis tool. The microprocessor chip logic is designed and the circuits are interconnected using a router tool. A wiring layout is obtained. Critical nets, such as macro-to-macro connections, data buses between central-processor-unit (CPU) to cache memory, long control lines, clock lines, are identified. From layout 100 in FIG. 10, lines can be grouped in pairs 101 (as shown in FIGS. 2-6) and a geometry information 102 obtained (layer, width, separation). The net trace subroutine 103 identifies the sending and receiving end of the wiring. The net is broken up into configurations that are of the type exemplified by FIGS. 2-6. The RLC elements are obtained from tables 104, 105, and 106. Synthesized circuits are calculated based on variables stored in tables 107. From the net trace 103 routine the driver and receiver circuits are identified. A simplified linear device model is selected from a table of device models based on transistor sizes 108. A quiet line can be surrounded by sections of active lines."

Note that layout step 100 happens without any selection of transmission line topologies from a library such as provided by claim 43. "Synthesized circuits are calculated based on variables stored in tables 107." Tables 107 hold the "prestored

synthesized circuits" that the Examiner quotes. These circuits are not selectable as design elements but are models of the expected types of circuit layouts and form "equivalent circuits" to the circuits identified in layout 100 (see the previous paragraph at col. 4, line 66: "The equivalent circuit is then synthesized"). These synthesized circuits are used for simulation in step 109.

Dansky does not show "an integrated circuit design library" and certainly not one for "providing design elements for analog and mixed signal circuits". Dansky, instead, shows an analysis tool for use after the design (after layout 100) is finished.

Dansky does not show "a set of selectable transmission line topologies selectable as design elements". Dansky's transmission line topologies are identified after layout (in step 101) (see the above quote: "From layout 100 in FIG. 10, lines can be grouped in pairs 101 (as shown in FIGS. 2-6) and a geometry information 102 obtained (layer, width, separation).") Dansky's topologies are not "selectable as design elements" as recited in amended claim 43; rather, they are identified and then suitable transmission line models are provided for the simulation. The topology used for the simulation is not selected from among a possible set of ones a designer might want; there is only one model that is suitable for the topology already placed into layout 100.

The present invention does not provide models; it provides a library with "a set of selectable transmission line topologies selectable as design elements". Dansky does not show nor suggest such a library and nor such selectable topologies. Therefore, Dansky cannot anticipate claim 43, as amended.

Accordingly, Applicants respectfully assert that amended independent claim 43 **is** allowable. Claim 44, 45 and 47 depend from, directly or indirectly, claim 43 and therefore include all the limitations of those claims. Therefore, Applicants respectfully assert that claims 44, 45 and 47 are likewise allowable. Accordingly, Applicants respectfully request that the Examiner withdraw the rejections to claims 43 – 45 and 47.

Applicants believe that the above amendments and remarks are fully responsive to all the objections and grounds of rejections by the Examiner. In view of the foregoing amendments and remarks, the Applicants respectfully submit that all the

pending claims are deemed to be allowable. Their favorable reconsideration and allowance is respectfully requested.

Should the Examiner have any question or comment as to the form, content or entry of this Amendment, the Examiner is requested to contact the undersigned at the telephone number below. Similarly, if there are any further issues yet to be resolved to advance the prosecution of this application to issue, the Examiner is requested to telephone the undersigned counsel.

Please charge any fees associated with this response to Deposit Account 09-0468.

Respectfully submitted,

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